

**REMARKS**

Applicants wish to thank the Examiner for the thorough examination of this application. Claims 28 through 59 remain pending in the case, with claims 1 to 27 canceled.

Claims 28, 30-31, 35-36, 38-50, 53, and 55-59 are rejected under 35 USC § 013(a) as being unpatentable over Trost et al. U.S. Pat. No. 6,142,434 in view of Shaffer U.S. Pat. No. 2001/0031329. However, Trost only discloses a multi-purpose utility pole with a clamp mechanism rather than the traditional through-bolt fastening mechanism. A traditional cross-arm 22 is shown, presumably given other teaching in the prior art made of wood. The Office Action concedes that Trost et al. '434 "fails to teach the cross-arm and extension arm all formed of metallic or coated with insulator coating." Office Action at 3.

Shaffer '239 is not directed to a utility pole at all. Rather, it is directed to an insulation system which comprises a tubular layer of insulation having an inner periphery and outer periphery including an elongated split therein for allowing a tube to be received within the inner periphery of the insulation, and a wick disposed within the inner periphery of the insulation and extending through the split to the outer periphery of the insulation and a vapor retarder on the outer periphery of the insulation. The assembly includes a flap initiating on the first side of the split which extends over the split and may be attached to the vapor retarder of the second side of the split. This is a structure for building and maintaining a pneumatically-sealed pipe insulation structure that is highly desirable, with a mechanism or structure which can transport water away from the pipe to the exterior of the insulation where it can evaporate.

The structure of Shaffer et al. is entirely inapplicable to the presently-claimed subject matter. Shaffer et al. neither teaches nor suggests anything about solving the problem in utility poles solved by the present invention. As stated in the Manual of Patenting Examining procedure:

"Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. 'The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary

skill in the art.’ *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objection evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).”

§ 2143.01 at 2100-125.

The present invention involves a simple concept, but that does not mean that the evidence required to establish *prima facie* obviousness is reduced. In *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000), the Federal Circuit reversed an obviousness rejection involving a technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed invention). *Accord*, MPEP § 2143.01 at 2100-126; *see also*, *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.)

Moreover, if the teachings of those skilled in the art are considered, as they must, it is certain that the presently claimed subject matter was **not** obvious to those skilled in the art. One of the fundamental problems that has plagued the art of medium voltage electricity distribution is the electrocution of birds on the cross-arms of utility poles. Indeed, as the publication submitted herewith shows, utility companies have been criminally prosecuted for electrocution of raptors by power lines. *See, Raptor Electrocutions and Distribution Pole Types*, at p.3, submitted herewith. Moreover, major outages of power service and prairie and forest fires can result. As a result a host of different configurations for utility pole cross-arms have been devised and are now mandated as part of permitting and licensing requirements by most federal agencies in the United States. *See, Suggested Practices for Raptor Protection on Power Lines: the state of the art in 1996*, submitted herewith. These designs have included ground steel bayonets (*e.g.*, Figure 24 at 60), grounded steel cross-arms with exposed jumper wires (*e.g.*, Figure 25 at 61), non-conducting extension links (*e.g.*, Figure 26 at 62), anti-perch guards to discourage perching (*e.g.*, Figures 29 and 30 at 66-67), elevated perches with perch guards (*e.g.*, Figure 23 at 59), insulated wire covers (*e.g.*, Figure 21 at 56), side mounting of wires eliminating the cross-arm (*e.g.*, Figure

31 at 69), providing an insulated pole top or upper perch bar with insulated or covered jumper wires (*e.g.*, Figures 30, 31 and 35 at 67, 69 and 74), raptor-safe compact and suspending designs (*e.g.* Figures 33 and 34 at 72 and 73), and suspended phase conductors allowing safe perching on pole top and cross-arms (*e.g.* Figure 37 at 76).

As an alternative, metal utility poles have been proposed which serve as their own ground. *See American Iron and Steel Institute's Technical Session*, May 17, 2002, on Steel Distribution Poles, submitted herewith. These alternatives have involved use of wood or fiberglass cross-arms, and a thermoplastic polymer membrane wrapped about the steel pole at the cross-arms. *Id.* Additionally, perch guards were mounted to the cross-arms, fiberglass pole extensions, suspended insulators and conductors, and insulated snap fit insulator covers for the wires were use. *Id.* *See also, Raptors at Risk*, pp. 751-755, and *Steel Distribution Poles -- Environmental Implications*, submitted herewith,

As shown by these publications, the evidence from those skilled in the art is overwhelming as to the nature of the problem, and the extent to which the art has gone to try to solve the problem. Moreover, **no where** in these publications, disclosing myriad solutions to the problem, is the elegant solution to the problem provided by the presently claimed invention disclosed or suggested. This is the strongest and most persuasive evidence of the **non-obvious** of the present invention. As instructed by the Manual of Patent Examining Procedure: "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vick*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." MPEP § 2143 at 2100-125.

In addition, the modification of Shaffer et al. in view of the presently claimed subject matter proposed would involve modification of the Shaffer reference contrary to its teachings. A key feature of the Shaffer structure is a wick which allows transport of water away from the pipe to the exterior of the insulation where it can evaporate. Such a wick mechanism would not be useable in the presently claimed subject matter. Here again, the Manual of Patent Examining Procedure is instructive:

"If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) (Claimed device was a blood filter assembly for use during medical procedures wherein both the inlet and outlet for the blood were located at the bottom end of the filter

assembly, and wherein a gas vent was present at the top of the filter assembly. The prior art reference taught a liquid strainer for removing dirt and water from gasoline and other light oils wherein the inlet and outlet were at the top of the device, and wherein a pet-cock (stopcock) was located at the bottom of the device for periodically removing the collected dirt and water. The reference further taught that the separation is assisted by gravity. The Board concluded the claims were *prima facie* obvious, reasoning that it would have been obvious to turn the reference device upside down. The court reversed, finding that if the prior art device was turned upside down it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would allow out of the outlet instead of the purified gasoline, and the screen would become clogged.).”

MPEP § 2143.01 at 2100-126.

In sum, it is fundamental that “[t]o establish a *prima facie* case of obviousness, ... [f]irst, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.” MPEP § 2143 at 2100-124-125. As the Manual of Patent Examining Procedure goes on to explain:

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.’ *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).”

MPEP § 2143.01 at 2100-125. Here, as explained above, there is absolutely no motivation or suggestion in the nature of the problem solved, the teachings of the prior art, or the knowledge of the persons of ordinary skill in the art that would disclose or suggest the presently claimed invention.

Finally, the attention of the Examiner is respectfully directed to the following instruction of the Manual of Patent Examining Procedure:

“To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn

by the hypothetical “person of ordinary skill in the art” when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention ‘as a whole’ would have been obvious at that time to that person. Knowledge of applicant’s disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the ‘differences,’ conduct the search and evaluate the ‘subject matter as a whole’ of the invention. The tendency to resort to ‘hindsight’ based upon applicant’s disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.”

MPEP § 2142 at 2100-123.

Therefore, for the foregoing reasons, claims 28, 30-31, 35-36, 38-50, 53, and 55-59 should be allowed.

Claims 29, 34 and 37 have been rejected under 35 U.S.C. § 103(a) over Trost et al. and in view of Shaffer and further in view of US Application Publication 2003/0173104 to Dell’Anna et al. Dell’Anna adds nothing to fill the deficiencies of Trost et al. and Shaffer. Dell’Anna discloses a cable for medium or high voltage electrical power transmission and distribution, with a conductor coated with a thermoplastic polymeric material. Dell’Anna teaches nothing about utility poles from which the cable would support in distributing the electrical power.

Claims 32 and 52 have been rejected under 35 U.S.C. § 103(a) over Trost et al. and in view of Shaffer and further in view of US Patent No. 4,085,010 to Ishimora et al. Ishimora et al. adds nothing to fill the deficiencies of Trost et al. and Shaffer. Ishimora et al. discloses a process for high speed plating. Ishimora et al. teaches nothing about utility poles from which the cable would support in distributing the electrical power.

Claims 33 and 51 have been rejected under 35 U.S.C. § 103(a) over Trost et al. and in view of Shaffer and further in view of US Patent No. 6,146,576 to Blackmore. Blackmore adds nothing to fill the deficiencies of Trost et al. and Shaffer. Blackmore discloses a unique composite material impregnated with a heat curable resin. Blackmore teaches nothing about utility poles from which the cable would support in distributing the electrical power.

Claim 54 has been rejected under 35 U.S.C. § 103(a) over Trost et al. and in view of Shaffer and further in view of US Patent No. 6,464,196 to Crookham et al. Crookham et al. adds nothing to fill the deficiencies of Trost et al. and Shaffer. Crookham et al. discloses an apparatus and method for providing a temporary spread footing for supporting a variety of different vertically extending structures. Crookham et al. teaches nothing about utility poles from which the cable would support in distributing the electrical power.

Applicants respectfully submit that pending claims 28-59 are in condition for allowance, and should be allowed. If the Examiner has any further questions or concerns, applicant respectfully requests that the Examiner telephone applicants' counsel, Arland T. Stein, Esq., at (317) 231-7390.

Respectfully,

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